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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|--------------|----------------------|---------------------|------------------|
| 09/869,123 | 10/03/2001 | Karsten Reihs | 209774US0PCT | 2354 |
| 22850 | 7590 | 04/18/2003 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | RIBAR, TRAVIS B | |
| ART UNIT | PAPER NUMBER | | | |
| 1711 | | | | |
| DATE MAILED: 04/18/2003 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/869,123 | REIHS ET AL. |
| Examiner | Art Unit | |
| Travis B Ribar | 1711 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 February 2003.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-54 is/are pending in the application.

4a) Of the above claim(s) 11-26 and 29-51 is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-10,27,28 and 52-54 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____

4) Interview Summary (PTO-413) Paper No(s). _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

1. The amendment filed February 20, 2003 overcomes the rejections put forth under 35 USC 112 in the office action dated August 5, 2002. Specifically regarding the rejection in paragraph 5 of that office action, the applicant's removal of the phrase, "or particularly" in claims 1 and 7 overcame the rejection.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-6, 8-10, 28, and 52-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al.

The office action dated August 5, 2002 contains the text of this rejection.

Regarding newly added claims 52 and 53, Clark et al. discloses a surface that may be either hydrophobic or oleophobic (column 2, lines 43-44 and column 7, lines 12-17), meeting that aspect of these claims.

4. Claims 1-5, 8, 27, and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al.

The office action dated August 5, 2002 contains the text of this rejection.

Regarding newly added claim 52, Takahashi et al. discloses a surface that is hydrophobic, meeting that aspect of the claim.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Baumann et al.

The office action dated August 5, 2002 contains the text of this rejection.

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. in view of Baumann et al.

The office action dated August 5, 2002 contains the text of this rejection.

8. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. in view of Goetz et al.

Clark et al. discloses a surface that meets the requirements of claim 1, but does not include a substrate made from AlMg₃. Goetz et al. discloses a substrate made from AlMg₃ used in solar cells. Since it is useful for solar cells to have hydrophobic or oleophobic surfaces in order to keep them clean during use, it would have been obvious to coat the substrate in Goetz et al. with the coating in Clark et al.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to coat the substrate in Goetz et al. with the coating in Clark et al. The

motivation for doing so would be to obtain a substrate (or solar cell) with hydrophobic or oleophobic surface properties. Therefore it would have been obvious to combine Goetz et al. with Clark et al. to obtain the invention as specified in claim 54.

9. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. in view of Goetz et al.

Takahashi et al. discloses a surface that meets the requirements of claim 1, but does not include a substrate made from AlMg₃. Goetz et al. discloses a substrate made from AlMg₃ used in solar cells. Since it is useful for solar cells to have hydrophobic surfaces in order to keep them clean during use, it would have been obvious to coat the substrate in Goetz et al. with the coating in Takahashi et al.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to coat the substrate in Goetz et al. with the coating in Takahashi et al. The motivation for doing so would be to obtain a substrate (or solar cell) with hydrophobic surface properties. Therefore it would have been obvious to combine Goetz et al. with Takahashi et al. to obtain the invention as specified in claim 54.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-10, 27-28, and 52-54 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the product made in the examples in the specification, does not reasonably provide enablement for any and every surface having the claimed properties. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims without undue experimentation.

Specifically, the claim currently covers all surfaces with the claimed properties. However, the specification does not enable one skilled in the art to make a surface with the claimed properties without using the exact methods or materials found in the examples. The full range of methods or materials that the claim covers is therefore not disclosed by the specification and one skilled in the art would require undue experimentation to discover the full scope of the applicant's invention.

Response to Amendment

12. The declaration under 37 CFR 1.132 filed February 10, 2003 is insufficient to overcome the rejection of claims 1-10 and 27-28 based upon Clark et al. and Takahashi et al. as set forth in the last Office action because:

The declaration purports to model four examples in Clark et al. and shows how they do not fit the currently claimed invention. The reference is not limited to the examples shown, however, and a persuasive declaration would have to overcome the teachings found throughout the reference, not just the examples shown by the reference. Since the declaration does not sufficiently show how Clark et al. does not

teach a surface with the applicant's claimed properties, it is insufficient to overcome the rejections based on Clark et al.

The declaration also attempts to overcome Takahashi et al., but provides no evidence to that end. The applicant cannot rely on evidence taken using the examples in Clark et al. to overcome the teachings of Takahashi et al. Further evidence must be provided in order to overcome Takahashi et al.

Finally, the examiner is not fully confident that the computer modeling in the declaration is an accurate representation of the examples in Clark et al. The examiner is unsure how any necessary parameters were modeled since the applicant did not actually make the invention from which the data was gleaned. It appears that the modeling that the applicant performed represented only an estimate of what the surface of the examples in Clark et al. represent. If that were the case, then the final data the applicant relies upon to prove that Clark et al. does not contain the presently claimed invention would not appear to be precise enough to support such a position.

In view of such issues, the declaration under 37 CFR 1.132 filed February 10, 2003 is insufficient to overcome the rejection of claims 1-10 and 27-28 based upon Clark et al. and Takahashi et al. as set forth in the last Office action.

Response to Arguments

13. The applicant argues that the examiner's position of inherency is not accurate with regard to the relationship the examiner inferred between the contact angle and the S value of the substrate. The applicant supports this position by citing the declaration

filed February 10, 2003. The declaration does not overcome the references for the reasons cited above, and since the examiner is not sure of the validity of the measurements made in the declaration because of the modeling methods the applicant used, the applicant's arguments with regard to the relationship between the contact angle and the S value of the substrate is also not persuasive.

14. With regard to the enablement rejection in this office action, the examiner previously believed that the claims were fully enabled by the specification. This was based on the apparent teaching in the present specification that any surface with a contact angle above 150° would inherently possess the applicant's claimed S value.

The applicant attempted to overcome this interpretation of the specification by filing a declaration apparently showing results that conflicted with the examiner's interpretation. However, in by providing evidence that not all surfaces have the relationship between the contact angle and S value that the applicant claims, the applicant also removed the basis for enablement the examiner had previously relied upon. This led to the enablement rejection found in this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar
Examiner
Art Unit 1711

TBR
April 15, 2003


James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700